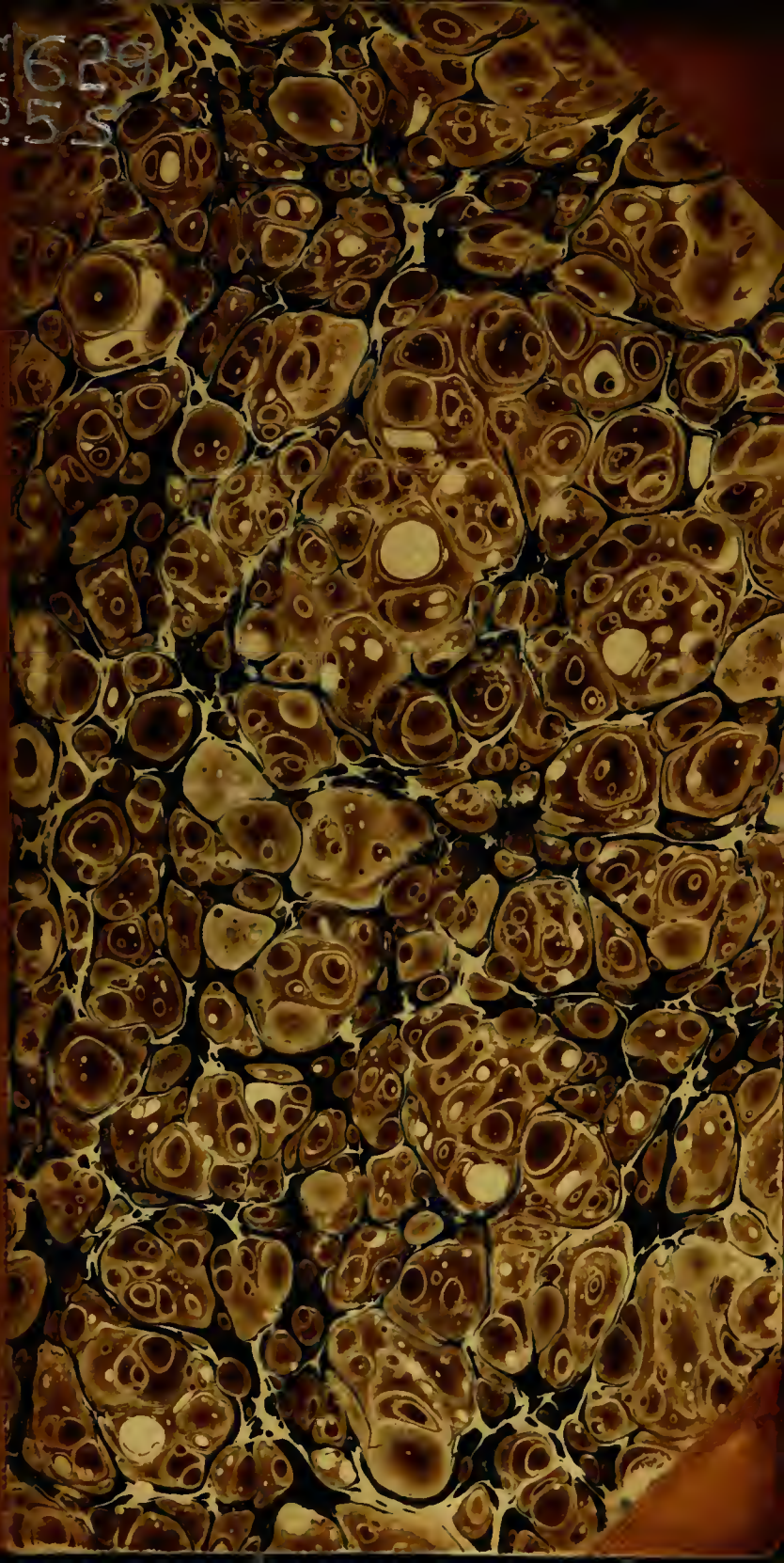
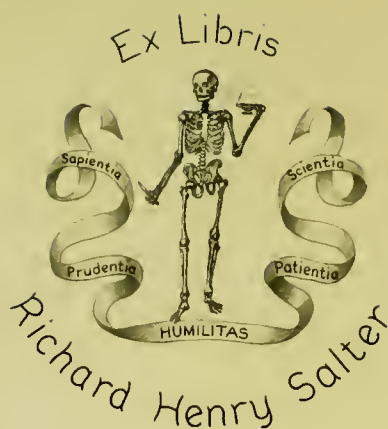


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THE GIFT OF HIS DAUGHTER.

Edith Agnes Salter.





OBSERVATIONS
ON
THE USE
OF THE
COLCHICUM AUTUMNALE
IN THE
TREATMENT OF GOUT;
AND ON
THE PROPER MEANS OF PREVENTING THE
RECURRENCE OF THAT DISORDER.

BY

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PREFACE.

IN the following pages, I have endeavoured to present a clear outline of my opinion on the use of Colchicum; and of the view which I have taken of the theory and treatment of Gout.

Having already published an extended Treatise on the subject, I conceive it right to state, that I have been led to the determination of presenting this little work to the public, by the following considerations:

I am convinced that the colchicum autumnale, administered in its *mildest form*, and in conjunction with other medicines, is a valuable auxiliary in relieving the symptoms of gout. Ample experience enables me to assert, that, if properly used, it is in-

nocent in its immediate effects, and does not in the smallest degree injure the constitution.' But I am aware that it has been much abused in its employment; and I fear that, unless the true merits of the medicine be fairly represented, the force of prejudice, derived from mistaken conclusions, may too probably deprive the gouty sufferer of one of the most important agents for the relief of gouty irritation, which we possess.

I will not anticipate more of the subject, in this prefatory address, than merely to observe, that, while I thus place a great value on the proper and combined use of colchicum, as helping to relieve the symptoms of gout; I consider, that the treatment of the causes of the disorder, is wholly to be found in other means.

*Wimpole Street,
February 18th, 1825.*

OBSERVATIONS
ON THE
USE OF COLCHICUM IN GOUT,
&c. &c. &c.

THERE is not, probably, a more interesting medical question at the present moment, than the propriety of using the *Colchicum Autumnale*, or Meadow Saffron, in the treatment of Gout.

The public mind is prone to run into extremes of thinking and acting, in regard to any remedy of a popular nature. Almost every individual in society is become acquainted with the name of the meadow saffron; and most gouty persons have, for

several years past, been in the familiar habit of using some one or other preparation of this root. The very circumstance of such an indiscriminate employment of this active medicine, must have led to frequent mischief. The medical world appears also to be much divided, at present, as to the safety of using this remedy in the treatment of gout. Vague rumours prevail of evil consequences resulting from its influence; and, so far as I can ascertain, an idea has got abroad that paralytic symptoms are an occasional consequence of the free use of this medicine. It surely becomes a consideration of very great importance, to determine whether the objections to the employment of colchicum have their foundation in truth or in prejudice.

I shall endeavour to treat the subject in a manner quite intelligible to the general reader; for, although I wish also to make it a medical investigation, and to address my-

self to the medical public, yet it is so obvious that gouty patients take upon themselves the treatment of their own cases, that, in my opinion, they stand in need of a clear exposition of the true bearings of the question from a medical pen.

I trust that I shall not appear to assume too dictatorial a style, if, in the following observations, I express myself with an earnest degree of confidence, derived from the extensive experience which I have obtained, during many years, in the treatment of gout.

Previously to my observations on the merits of colchicum, and upon the treatment of gout, I shall offer some remarks on the nature of the disease, in order that my principles of practice may be clearly understood.

We cannot too steadily keep in view, that

the peculiar external appearance of complaint which we denominate the gout, is the least part of the disease, and is to be regarded as the symptom of some error in the constitution. The local suffering is the effect of a cause which is existing in the system. This fundamental position being admitted, our next inquiry is, what is the nature of the constitutional cause which gives rise to this specific inflammation in the extremities? The knowledge of the proximate cause, or that one essential and indispensable state of the system which is the invariable antecedent of the disease, is an interesting problem which baffles our most acute research. It is a difficulty, however, not exclusively belonging to gout. The inflammation of St. Anthony's fire is of a peculiar or specific kind; but we are not able to show that, during its existence, the blood possesses any essential chemical difference from that which belongs to it during gouty inflammation, or even common inflamma-

tion. And in those humoral diseases, in which the peculiar or specific fever of the system arises from the admixture of a virus with the blood, as, for example, the small pox, we do not pretend to determine the chemical condition of the blood, or to use chemical remedies.

We must rest satisfied with the fact, that some individuals possess in their constitution an hereditary disposition to gout, which comes into action in proportion as it is called forth by exciting causes; and other individuals acquire this disposition wholly by means of the influence of improper habits of living, acting upon that peculiarity of constitution which involves the inscrutable question of proximate cause.

We see every day some striking examples of the absence of all appearance of disposition to gout, in persons who do not avoid the predisposing and exciting causes with

any degree of care ; I mean as to irregularity and excess in their habits of living. Evil consequences will of course ensue ; but, in these particular instances, it would seem that the gout cannot be produced. For the most part, however, those persons who eat heartily of animal food, and who drink, freely, wine or strong malt liquor and spirits, become subject to gout ; unless the influence of such causes be counteracted by very active exercise, and by a strength and equality of balance in the whole circulation ; so that, congestion in the vessels of the viscera below the stomach, is not in any considerable degree produced.

In answer to the positive and very interesting question, what is gout ? I shall, with the premises already advanced, avoid the discussion of proximate cause, and direct my view to all the most obvious, most characteristic, and most clearly marked circumstances which distinguish the disease.

The gout, even in its first visitation, is a compound disease, as I have already stated, external in its appearance, internal in its cause. The paroxysm often takes the patient by surprise, and finds him in the enjoyment of health, or, more correctly speaking, possessing comfortable feelings and those good looks which give the portrait of health; although, most assuredly, the constitution is not really in a healthy state. For example, the day shall be passed with all the seeming evidence of health which I have just mentioned, and on the same night a paroxysm begins, which, if left to its own course, might last for two or three months, breaking down the constitution and leaving the whole frame crippled, and the nervous system exhausted.

I am now giving a general description, and claim a licence against the exceptions to it, which occasional and individual examples would furnish. In this general view,

therefore, I proceed to observe, that the kind of constitutional error which attends a first fit of gout, is an overcharged state of the vessels which belong to the abdominal viscera, and chiefly in the vessels connected with the liver ; the secreting action of this important organ being also, in some way, altered from its usual state. The stomach itself is the organ least deviating from its ordinary and healthy state. The appetite very commonly continues natural, unless, indeed, the symptoms are sufficiently severe to produce high sympathetic fever, when thirst and loss of appetite would naturally follow. The stomach, it is true, has been the parent source of the gout, in being the medium through which too much animal material has been introduced into the system ; but it seldom suffers itself any sensible inconvenience in the first instance.

In the progress of time, if improper habits are continued, dyspepsia or true indi-

gestion will be produced. Most commonly, we find upon inquiry that the patient traces a gradual enlargement of the abdomen, joined with various indications of an increasing fulness of habit. The veins, especially in the lower extremities, but also in the hands, are more distended with blood than is natural. The medical observer, upon a closer investigation, discovers a want of due softness and pliancy in the right hypochondrium, where the principal part of the liver is situated; the whole of the abdomen is unduly distended; and the muscles are usually much covered with an accumulation of fat.

In a few words, there is too much abdominal corpulence; the secretions are changed from their natural state; the intestinal evacuations are darker than usual, have a morbid degree of foetor, and lead us to the conclusion that the bile has acquired an irritating and acrimonious quality. I

infer, under such circumstances, that the liver, receiving an excessive supply of blood from that important vessel called the vena portæ*, is stimulated into increased action; and not only is a larger quantity of bile formed, but also it is more exciting in its quality. That the process of assimilation, or the conversion of chyle into blood, is disturbed from the healthy course, is most commonly proved by the condition of the urine, which has a higher specific gravity than usual, is strongly animalized, and deposits dense sediments. Such sediments consist of the usual salts in excess, together with animal matter, which the kidneys, in the office of salutary aid to the constitution, secrete from the blood. From these appearances, we derive a conclusion that the

* This vein returns the blood from the stomach and intestines, and from the spleen, pancreas, and omenta. It enters the liver by branches, which subdivide and are distributed through its substance, conveying blood for the purpose of the secretion of bile.

process of assimilation is not perfectly performed, and that the blood itself is not in a natural and healthy condition.

Aperients and correctives, and reduction of diet, in slight cases, usually effect a cure in a short time ; and in some examples of a first fit of gout, the complaint readily yields to still more simple treatment ; as a moderate use of some cooling aperient, cooling diet, and rest.

Some persons who have taken the alarm from a first visit of the gout, and who have had the resolution and the prudence to adopt a considerable degree of forbearance in their habits of living, and care in their general regimen, have been successful in preventing a return of the complaint. These have been principally instances of acquired gout ; but when the disposition is hereditary, and very strongly existing, it must be admitted that every care will not entirely counteract

the return of the disorder. Yet the value of such care is not to be the less esteemed ; for it will serve most materially to mitigate and diminish evils, which cannot be altogether prevented.

The gout, then, is a disease prone to return more or less frequently, to increase in severity, and to affect a great number of parts, as the constitution becomes more subjected to its decided influence.

Even in its simplest form, as exemplified in a first fit, I have already stated that it is connected with that species of repletion which belongs to the vessels of the abdominal viscera, and chiefly of the liver : but, in its progress, it manifests this connexion much more strongly ; and I do affirm that, in every long-established case of gout, the functions of the liver are more or less unhealthy ; and, in a very large proportion of cases, the symptoms of gout are entirely

supported by great derangement of the biliary system, and by an unhealthy condition of the intestinal canal. This disorder of functions is rendered manifest by the appearance of the excretions.

The most remarkable cases of frequent relapse of gout which I have seen, have been those in which the error in question has been very conspicuous ; and especially where such error has been increased and confirmed by improper treatment of the gout. This disorder is one which powerfully deranges the nervous system.

Let us now take a short review of the theory and practice which have prevailed in ancient and modern medicine up to the present time.

The Greek physicians appear to have considered the gout and rheumatism as one common disease, and to have denominated

the varieties of either disease according to situation ; as, podagra in the feet ; chiragra in the hands ; pechyagra in the elbow ; gonagra in the knee ; dentagra in the teeth ; cleisagra in the articulations of the clavicles ; omagra in the articulations of the humerus ; rachisagra in the spine of the back ; and tenontagra in the large tendons*. These terms also descended to the Latins, and were in the same manner indiscriminately applied to gout and rheumatism. In the study, therefore, of the practice of the ancient physicians, we are led to the conclusion, that the two diseases, gout and rheumatism, were not differently treated upon principle ; but that, for either disease, remedies were applied, chiefly according to the doctrines of the humoral pathology ; and of necessity must have been varied, accordingly as the symptoms should prove acute or chronic.

* Cœlius Aurelianus, lib. v. cap. 2.

Hippocrates recommended purgatives and diluents, and the application of cold water to the inflamed part, so as to induce numbness and relieve the pain. It does not appear that the ancient physicians felt any apprehension in treating the gout with freedom; and we find accordingly that bleeding and purgatives, and different kinds of local treatment, were amongst the remedies usually employed. It seems to have been a favourite practice to use cold applications to parts which were too warm, and warm applications to parts which were too cold.

In the works of Alexander Trallian we find a theoretical division of gout, according to the favourite belief of the four humours of the body; as the bilious, the sanguineous, the pituitous or phlegmatic, and the melancholic gout. The means of cure were proposed in reference to these distinctions; as venesection for the sanguineous gout, and cathartic medicines of different kinds to suit

the particular offending humour. One formula mentioned by this author contains the following powerful ingredients : aloes, scammony, seeds of wild cucumber, and hermodactyls.

Notwithstanding, therefore, that the practice of the ancient physicians, to which I have made this brief allusion, might be promiscuously applied to gout and to rheumatism, it is evident that they considered it proper to treat the gout with active remedies. In Bernard's edition of a very old Greek MS.* upon the gout, Leyden, 1743, written by Demetrius Pepagomenus, at the desire of the Emperor Michael Palæologus, who reigned anno 1282, and which appears to have been first rendered into Latin by Marcus Musurus, at Rome, in 1517, I find a prescription, according to the following translation :

* For a notice of this MS. and some interesting observations respecting colchicum, see Kerr's Medical Sketches.

“Composition of the simple purgative pills. Aloes, one part ; hermodactyl, a half part ; liquorice or cinnamon, in order that the hermodactyl may be rendered agreeable to the stomach, a half part ; of the purest scammony, a sixth. Let these ingredients be formed into pills, and administered according to the strength of the patient, the quantity and particular kind of humour, and the season of the year.”

In several other prescriptions in this little treatise, the hermodactyl was the principal ingredient.

Sydenham wrote upon gout in 1683, and may probably be considered as the first author who gave a correct description of the disorder ; but his theory and practice were founded on the strict doctrines of the humoral pathology ; and, although he observed and described the symptoms of the disease with all the discrimination and fide-

lity of an excellent physician, we must consider that his practical opinions were narrowed and shackled by the prevailing theory of that period, regarding the humours of the body. Such doctrine, although not deserving to be altogether exploded, requires simplification and purifying from error.

I consider it unnecessary to animadvert, in this place, on the practical opinions delivered by Sydenham, which are now, for the most part, discarded. The affecting description which he has given of his own increasing sufferings from gout, in its progressive power over his constitution, serves but little to recommend his method of treatment.

It would be a task of no small labour to enumerate the various hypotheses, which have been offered within the last two hundred years, on the nature of gout. It has most commonly happened that an author, having

adopted some favourite notion of the particular kind of morbidic humour, supposed essentially to produce the gout, has framed a corresponding method of practice, which, having had a short popularity, has died away, and yielded to some fresh novelty.

In the year 1804, a Dissertation on Gout was published by Dr. Kinglake, of Taunton, recommending, in the most unqualified manner, the application of cold water to parts affected with gout; the author contending for the propriety of treating this inflammation as a local disease.

This practice, for a considerable time, had its bold advocates; but, having made some fatal victims, and often given warnings of danger, in producing sudden sensations of internal spasm, it has been universally laid aside; and scarcely any one can now be found who does not, as regards

this particular treatment, give way to the dictates of prudence and common sense.

As an æra in the treatment of gout, the introduction of the Eau Medicinale must be recorded as the most remarkable. This medicine appears to have been first known in France, rather more than forty years ago, and was prepared by Monsieur Husson, an officer in the French service ; but its virtues were extolled by him for diseases in general, and it was never much employed in France in the treatment of gout. At an early period, the administration of it was altogether prohibited by the French Government. It came into use in this country about fifteen years ago ; and it may truly be asserted, that never did a remedy gain such rapid and general popularity as this seeming panacea for all the sufferings of gout. Never, perhaps, were the delusive powers of palliative treatment more strongly exempli-

fied, than in the final effects of this medicine. In its first trials, in the majority of examples, the patient seemed to obtain a cure as from a charm ; so speedy and magical was its influence. But the fallacy of the apparent cure always appeared sooner or later ; and the frequent failure of the remedy, in many instances, to produce even temporary relief ; with the very serious and even irreparable injury often inflicted on the constitution ; in the course of a few years, brought the true character of the medicine to light. Meteor-like, its undeserved fame ere long declined, and has now wholly passed away !

The *Colchicum Autumnale* was the next remedy offered to public attention for the relief and cure of the gout. We are to consider this medicine as the *hermodāctyl* of the ancients, and to which I have already made allusion.

I had made some private trials of this

medicine in gout, for a short period before I met with the account given of its effects by Mr. Want, in the Medical and Physical Journal, No. 185.

From comparative trials with the powder of the root; the tincture; and the acetic preparation, I soon became convinced of the remarkable mildness of the latter, and the preference due to it in that particular. By joining it with magnesia and a neutral salt, such as the sulphate of magnesia, I found a combination inoffensive to the stomach, and remarkably certain in its operation on the bowels. I was at a very early period impressed with the conviction, that the most favourable use of the colchicum consisted in making a selection of this the mildest preparation, and of employing it only in combination with other medicines of an aperient and corrective nature. It was my object to borrow, in a safe manner, from the power which this medicine might

exert over the symptoms of the disorder, but not to regard it as a lasting agent of cure.

During my progressive experience in the treatment of gout, the asserted power of colchicum in curing the disorder became more and more promulgated. Sir Everard Home introduced into use a vinous infusion, which he directed to be made by macerating two pounds of the fresh roots with twenty-four ounces of sherry wine, in a gentle heat for six days, the spirit being previously carried off by heat*. He considered this medicine to be identical with the eau medicinale, and that each remedy acted as a specific cure for the gout. It appeared to him, that when this infusion was administered in its transparent state, after the re-

* This watery rather than vinous liquor proved so unfavourable a menstruum, that it has not been employed.

moval of the deposit which it gradually makes, it acted with much greater mildness ; and he extolled it as a complete and successful remedy.

In the year 1815, Dr. Wilson published an account of the effects of his tincture in gout, assigning many plausible reasons for not disclosing the nature of his preparation, upon which I need not comment. He expressed himself dissatisfied with the effects of colchicum, remarking, “that he uniformly found it inefficacious when administered in small doses, and most unmanageable in doses which might be deemed moderate: in the former, it generally produced no sensible effect, and in the latter it not unfrequently acted upon the stomach and bowels in a violent and distressing manner. The relief it afforded to the patient was commonly but of short duration and incomplete ; the disorder either speedily

recurring in the joints first affected, or attacking other parts with as great violence as ever*.”

Of his own tincture he says, “its powers in removing the gout, have been equally astonishing as those attributed to the eau medicinale, by the warmest friends of that medicine; whilst it has not been attended, in any single instance, with dangerous or even violent effects.”

Soon after, I believe; a nostrum, which was vended under the title of Reynolds' Specific, made its appearance.

Had the Poet Lucian lived to witness these formidable attacks upon his Goddess Podagra, in what terms would he have expressed his resentment! Doubtless he would have pictured the latent and future ills of

* See Wilson on Gout, first edition, p. 42.

such improper assaults upon the human constitution ; and recited a catalogue of the permanent evils, succeeding to the temporary and deceptive benefit obtained.

In such false methods of treatment, the benevolent Sydenham would have looked in vain for the effectual relief to the gouty sufferer, which he fondly contemplated to be reserved for the future art of medicine to discover.

Whilst I proceeded in the steady practice of that doctrine, in which careful reflection and successful experience had taught me to confide, I felt it my duty to give the whole question a full examination, to investigate the qualities of the different boasted remedies, and to learn, from the most intelligent sources of information, what were the present and permanent results of the empirical method of treatment.

I thus express myself of the principle of practice, whether any of these powerful agents be used ; namely, the eau medicinale, Wilson's tincture, Reynolds' specific, or the strong preparations of colchicum. These remedies are almost always employed in a manner to procure their full and immediate influence on the nervous system ; an effect which may be called their most specific mode of acting ; the sole object being to arrest at once the progress of the disease, and dismiss the symptoms, without any inquiry as to the particular state of constitution in the individual.

It has been a very natural question, asked on all sides, what is the composition of the different nostrums, and in what essential particular do they differ ?

With respect to the chemical part of the investigation, we are confined within narrow limits ; because the substances of the vegeta-

ble kingdom do not admit of satisfactory results in any attempt of ultimate analysis, when we have it in view to identify any particular substance. Hence also, an easy and convenient cloak is afforded to the purposes of empirical compounders of medicine; because the sensible properties, as taste, smell, and external appearance, are easily disguised. The general reader will understand, that by the term ultimate analysis, as applied to vegetable bodies, I mean the resolution of a substance into its ultimate or primary component parts, by means of high temperature. The chemist cannot employ the same processes in analysing organized substances, as he uses for the inorganic.

I beg to refer the reader to my Treatise on the Gout, &c. for the more extended details of my investigation, and shall here state only the general results in the most compendious manner.

From what I have already said, it will appear obvious that all conclusive argument respecting the properties of these different medicines, must be drawn from the kind of influence which they exert, as medicines, on the human constitution, and upon the animal economy.

Of the popular remedies in question, the eau medicinale may be considered the most active in its operation, relieving the symptoms of the gout more quickly, but also proving, finally, the most injurious.

Wilson's tincture, the next in strength, appears to act precisely in the same manner as the eau medicinale; but must be given in a larger dose, in order to relieve the symptoms quickly. It often disagrees exceedingly with the stomach. Many persons relate to me, that, after having used the medicine for a considerable time, they have at length felt the most nauseating

repugnance even to the sight of it, and when they have surmounted that aversion, have been sickened and made giddy, to a distressing, if not an alarming, extent. I have known the strongest persons rendered very nervous from its influence ; sometimes in a fearful degree. In a few instances, it has continued to give relief to the symptoms without any seeming abatement of its efficacy ; but such favourable examples are rare, and I do not know any instance in which it has not weakened the nerves more or less.

Amongst the large collection of reports which I possess of the effects of this medicine, it may be sufficient to select the two following narratives, which are not, in the least degree, exaggerated.

One gentleman who took it very steadily for many months, and was its warm advocate, tells me that the gout, which for-

merly did not recur at a shorter interval than three months, has, since the employment of this tincture, returned every ten or fourteen days. His previous favourite remedy was the eau medicinale, and, from the similarity of operation in his case, he considers the medicines to be the same.

Another very gouty subject, usually having one severe fit in the year, in the first use of this medicine, thought himself possessed of a most valuable prize, and, in his joy, almost disregarded the gout. But see the quick sequel! His relapses were frequent, and the influence of the tincture over the symptoms became weaker. He was without appetite; he suffered sensations of weight, tightness, and general oppression about the stomach and abdomen; and was miserably nervous. At length, during even all the summer months, he was not free from actual gout for the space of a

fortnight; and in vain did he seek relief from his former boasted antidote.

I could relate almost an infinity of cases in which this tincture has, after a time, entirely disappointed the hopes of the patient, and given him more or less cause of regret, that he has depended on its palliative relief.*

Reynolds' specific, if taken in small doses, appears to have less influence over the symptoms than Wilson's tincture; but, in large doses, it very commonly operates violently both on the stomach and bowels. In no case within my knowledge, even when most successful, has it done more than effect a short cure; and all those persons

* For additional authority upon the injurious consequences of Wilson's tincture, I refer the reader to Observations published by Dr. Williams.

with whom I have conversed, state that they found sufficient reason to lay aside the use of this medicine, from a conviction of its being only a hurtful palliative.

Of the preparations of the colchicum autumnale, the tincture is the most active; proof spirit being the strongest solvent of the principles of the root; and we find, as a medicine, that it stimulates the most, and often irritates the stomach and bowels in a remarkable degree.

The wine from the roots is the preparation next in strength, and I should consider it as most deserving of preference in any case of disease in which we are desirous of obtaining the greatest share of specific agency which the colchicum possesses. It requires to be administered with care, for it is liable to affect the stomach with sickness, and the mucous membrane of the bowels with great irritation.

The wine of the seeds of colchicum is a less active medicine than the preparation from the roots. In full doses, it will produce irritation in the stomach and bowels; but, upon the most careful comparison which I can make, I consider it a less acrid preparation than the wine of the roots. I must repeat, however, that, if the decided agency of colchicum be wanted, the wine of the roots appears to merit most confidence.

Having taken this cursory view of the nature and medicinal power of these different preparations, I shall proceed to give a summary statement of the effects produced by the influence of these and some other powerful medicines upon the constitution of the dog; this animal, from the structure and functions of its stomach, serving the purpose of such illustration better than any other. I have stated the experimental investigation very fully in the third edition

of my Treatise on Gout and Rheumatism, and shall here confine myself to a concise narrative of the general results.

The following is a list of the various medicines which were employed:—Eau medicinale; Wilson's tincture; Reynolds' specific; hellebore and laudanum; elaterium and laudanum; Sir Everard Home's vinous infusion of colchicum; tincture of colchicum; expressed juice of the fresh roots of colchicum; the acetic preparation of colchicum; Want's gout remedy; an extract procured from the different preparations of colchicum by means of evaporating the fluid part over a water bath; the extract of a watery decoction of the macerated roots of some different preparations of colchicum, procured by evaporation of such decoction, in reference to the power of different menstrua in taking up the active principles of the root; elaterium; elaterium and laudanum;

hellebore ; hellebore and laudanum ; tincture of digitalis ; opium.

Most of these medicines were injected into the jugular vein, and were also administered by the mouth ; the more conclusively to allow of a comparative examination of their nature and agency.

The action of medicines upon particular organs and particular textures of the body, through the medium of the circulating blood has already been demonstrated by Sir Everard Home, in his experiments related in the Philosophical Transactions for 1816 ; and the experiments of earlier physiologists to the same effect, are related in the Edinburgh Medical and Chirurgical Journal for April 1817.

In my experiments, all the different medicines produced their effects in a much

shorter time when introduced into the circulation by the jugular vein, than when given by the mouth ; and the animal completely recovered from the effects of doses introduced into the stomach, which, administered by injection, proved fatal in a short time.

In some of the experiments, the proportion used for injection, compared with what was administered by the mouth, producing equal effect, was only as one to five. The eau medicinale proved much more active if given with the sediment which it deposits in the bottle after being kept, than when given clear. The same dog recovered completely from a dose of the clear liquid, while an equal quantity of the turbid proved fatal in nine hours.

The relative strength of the different medicines in equal quantities may be stated in the following order :—Eau medicinale with its sediment ; expressed juice of the

fresh roots of colchicum in a clear state ; Wilson's tincture ; eau medicinale clear ; a proof spirit tincture of colchicum ; Reynolds' specific, and Sir Everard Home's preparation, about the same in strength ; the wine of the roots prepared in the proportion of four ounces to a pint ; the acetic preparation of colchicum. No experiment was made with the wine of the seeds.

When equivalent doses of all the different medicines, except the last, were given, the same set of symptoms was produced ; namely, high irritation of the nervous system ; the pulse and breathing much disturbed ; sickness ; and a discharge from the bowels of blood and mucus. On dissection, similar appearances were also found ; which chiefly consisted of the strongest marks of inflammation in the stomach and intestinal canal, amounting in several instances to mortification. Indeed the symptoms during life, and the appearances after death, would entirely lead to the

conclusion that all the strong preparations just stated, were variations of the same medicine.

The influence of the particular kind of menstruum used with the roots of the colchicum, is strikingly shewn in the comparative effects produced by the tincture and the wine, prepared in the same strength; and still more remarkably in the effects from the acetic preparation, on which I shall have occasion to dwell at length. From injection into the jugular vein, of one hundred and sixty drops of the eau medicinale; the same quantity of Wilson's tincture; one hundred and eighty drops of Reynolds' specific; one hundred and sixty of the vinous infusion according to Sir Everard Home's formula prepared by Fisher of Conduit Street; and the same of the tincture of colchicum; death took place in a few hours, without any material variation in the appearances of inflammation in the stomach and intestinal canal, the mu-

cous membrane being the texture destructively injured. Of the acetic preparation of colchicum, 220 drops were injected without injury to the animal, and indeed without producing any other symptom than apparent lassitude for a short time.

The contrast was still greater in the effects of the doses administered by the mouth. No less than three ounces of the acetic preparation of colchicum, neutralized by magnesia, were given to a dog in two doses without the smallest inconvenience to the animal, and with the effect only of a moderate operation on the bowels and on the kidneys. Of the eau medicinale, three drams; of Wilson's tincture, six drams; and of the other preparations, Reynolds' specific, the wine and tincture of colchicum, doses proportionate in strength, as before explained, proved fatal.

The question which naturally arises after

this statement, of the remarkable mildness of the acetum colchici, is this ; does it possess sufficient efficacy ? Does the dilute acetic acid really extract the virtues of the colchicum ? For otherwise little praise would be due to it for the gentleness of its operation.

On the utility of this medicine in combination with other ingredients, I shall have occasion to expatiate ; and that the dilute acetic acid is a very efficient menstruum, is made evident by the following results.

Equal quantities of the roots, which had been macerated a sufficient time to give out their strength, in the several menstrua of proof spirit, wine, the liquor in Sir Everard Home's preparation, and the dilute acetic acid, were dried, boiled in water, reduced by evaporation to the state of an extract, and then given to the dog in equal doses.

My intention in this examination was

to ascertain the comparative power of the different menstrua in taking up the active principles of the colchicum.

The proportion of colchicum used on this occasion for the wine, the spirit, and the dilute acetic acid, was one ounce of the fresh roots to the pint; but in the preparation directed by Sir Everard Home, the quantity was twenty-one ounces to sixteen of the menstruum.

The result of these experiments with the dog, was, that the produce from the roots left by the wine rendered the animal ill for a few hours; but the symptoms were not serious, and he soon quite recovered. The produce from the roots left by the proof spirit, and the dilute acetic acid, did not occasion any symptoms of illness; while that from the roots in Sir Everard Home's preparation caused violent symptoms in a very strong dog, which proved fatal in thirty-six hours.

These experiments demonstrate, that the proof spirit and the dilute acetic acid acted more completely than the wine, in extracting the active principles of the colchicum; and that the proportion of the roots used in the preparation of Sir Everard Home was unnecessarily large, and far beyond the solvent power of the menstruum.

I found that one hundred and twenty drops of the expressed juice of the fresh roots of colchicum, injected into the jugular vein of the dog, produced violent symptoms more quickly, and proved fatal in rather a shorter time, than one hundred and sixty drops of the eau medicinale; and there was not the least material difference found in the state of the intestinal canal upon dissection. The expressed juice used in this experiment was obtained from fresh roots*, and the clear part only was employed. It

* In the course of my experiments, I found much difference in the strength of the colchicum roots; and I think it im-

throws down a copious sediment, similar to that which subsides from the officinal preparations, and which consists chiefly of starch and mucilage.

Sir Everard Home, as I before mentioned, considered it to be a great improvement in the administration of the vinous infusion of colchicum, that it should not be used till after it had deposited this sediment, which he conceived to possess highly acrid properties. I was much surprised, therefore, to find that it was completely inert, as I proved in an experiment, in which I gave to a dog seven or eight times the quantity used by Sir Everard in his experiment*, without the least ill effect upon the animal.

portant to mention, that they should, for the officinal preparations, be either used when quite fresh, or should be immediately dried, if it be intended to make use of them at a future period. I have seen roots which, instead of being firm and juicy, had become very porous and spongy; and we found that in this condition they proved inert.

* See Phil. Trans. part 2.

It is made evident by the experiment just related, that it would not be difficult to make a preparation from the clear part of the expressed juice, as strong as the eau medicinale ; and hence the perplexing difficulty of explaining the superior strength of the French medicine over the saturated infusion prepared by Fisher, is overcome. Rejecting the sediment entirely, a more active form of the medicine is at once obtained.

After the further investigation, therefore, which I have bestowed on this subject, I am led to the essential conclusion, that the eau medicinale, Wilson's tincture, and Reynolds' specific, are all preparations of colchicum.

I made comparative trials of the effects of hellebore and opium, and of elaterium and opium, because these compositions were supposed to be analogous to the French medicine ; but the results were so wholly

opposite to those procured from it and all the preparations of colchicum, that my previous opinion on the subject became strengthened.

The dog recovered from the effects of very large doses of these powerful medicines, as also from digitalis.

In my experiments on the dog with the different forms of opium, namely, the extract of the Pharmacopœia, the resin in a separate state, the sedative extract prepared by Mr. Battley, and crude opium ; I came to the conclusion, that opium in its crude or purified state may be considered as the most active anodyne, and the extract the most eligible sedative. If it be necessary to administer opium for the relief of pain without fever, I should prefer the tincture, or the purified extract ; but if fever be present, or in such constitutions as are highly susceptible to the stimulating influence of opium, I would

choose the sedative liquor or extract of Mr. Battley, or the acetate of morphia ; which last appears to be, of all the preparations of opium, the one which excites and irritates the least.

The reader may possibly ask, to what useful conclusion in practical medicine does this experimental investigation lead? I trust that I shall give a very satisfactory answer to this question. I again state that three drams of eau medicinale, and six drams of Wilson's tincture, given each in two doses, proved fatal to the dog; that all the strong preparations of colchicum had the same effect; and that three ounces (twenty-four drams) of the acetic preparation mixed with magnesia, also given in two doses, did not occasion illness, but merely acted moderately on the bowels and kidneys. I thus offer to the reader the fullest possible proof which can be given, that this last is a remarkably mild medi-

cine ; and whether or not it be useful and efficacious, must be determined by its effects on the human subject. It will at once be conceded, both by the medical and general reader, that if it do possess efficacious properties, it must be the most eligible medicine, from its being so mild in its mode of action.

I should not argue against the employment of the active preparations in question merely on account of their being powerful agents ; because such an objection might be presented equally to the employment of many valuable medicines in the *Materia Medica* : arsenic, mercury, opium, and so on.

The fundamental principle of my objection, is, the impropriety and danger of arresting the symptoms of gout, by means of the strong agency of these specifics, without producing any useful and adequate influence on the causes of the disease.

Let it be constantly kept in view, that all which appears externally, and to which the name of Gout is given, is but the least part of the real disease; and that the cause exists in the system within. I shall beg leave to recapitulate my observations on the pathology of the disease. In its first occurrence, the gout is a much more simple disease than afterwards, and most commonly the result of that particular kind of repletion which I have before described, belonging to the abdominal viscera. The patient has found himself growing corpulent, and particularly in the abdomen, and has acquired a fulness of habit; the excretory functions have been inert; and these circumstances concurring with the peculiar disposition to this disease, a paroxysm takes place.

In the course of years, the nervous system yields more or less to the dominion of gout; and it will often happen, that a fit

shall be produced by high nervous irritation, which may be the consequence of mental or corporeal causes, strongly affecting the nervous system. The strong passions of the mind; injury to the body from accidents; the disturbance produced by other diseases; have this influence.

The treatment of a fit of gout must be accommodated to the nature of the individual constitution, to the particular state of the system, and should also have a considerable relation to the causes which have produced it.

In general, it happens that the predisposing condition of the constitution which terminates in a fit of the gout, has been gradually forming for a considerable period of time. A state of disordered function in the several abdominal viscera has been insidiously taking place, of which the patient has been wholly unconscious.

Even as a matter of theory, it would appear quite unreasonable to attempt the cure of a disease thus slowly formed, although suddenly appearing, by means of the powerful agency of a single dose, or a few repeated doses of any medicine; and it would also suggest itself as a probability, that it would be attended with injury to the constitution, to dismiss the symptoms so quickly, while the cure of the cause could not by possibility be accomplished in so summary a manner.

Let us briefly inquire what has actually occurred in practice, from an attempt to cure the paroxysms of gout, by means of the different powerful medicines of which I have been treating.

The eau medicinale, from being the most active of these medicines, and consequently producing a more immediate removal of the symptoms of the gout, proved

to be the most injurious ; and innumerable examples having occurred of the most serious and lasting injury of the constitution, and a few instances even of fatal consequences, the use of the nostrum has been very generally abandoned. Ought not a similar fate to await the other strong medicines ? They act, in a minor degree, in precisely the same manner as the eau medicinale, and their employment therefore involves the same false principles of treatment.

From my experimental inquiry, I assume the conclusion, that the eau medicinale, Wilson's tincture, and Reynolds' specific, are all preparations of colchicum of different degrees of strength ; and further, that the tincture of colchicum, the wine of the roots as commonly prepared, the wine of the seeds, and the vinous preparation directed by Sir Everard Home, must be enlisted with the three nostrums, if employed

in a manner to produce their most distinct and specific agency

In my Treatise on the Gout, I have strenuously objected to the opinion of an eminent author, that the colchicum is “a specific remedy for the cure of gout;” and the refutation is at once supported by the examples which I have there quoted, of relapses of the disease taking place in very much the same ratio, in which, these falsely called curative remedies have been employed.

I admit most fully that these medicines exert a controul, which is not possessed equally by any other articles in the materia medica over the symptoms of the gout, the gouty irritation, and gouty fever of the system; but the cause of the symptoms having a deeper foundation, and consisting in a state of wrong functions in the abdominal viscera, more or less established, the cure of the disease itself cannot be so accomplished. It is put out of sight, masked, and hidden;

but, in most instances, returns with distressing frequency ; and, although it may be broken in force, it is more harassing in the sufferings which it inflicts, from the uncertain state of health which it occasions.

I grant, that occasional examples may be quoted, in which the employment of one and all of these medicines has given satisfaction ; but these are exceptions to the general rule, and do not at all affect the *principle*, theoretical and practical, which I desire to lay down. I may observe, that in proportion as the paroxysm of gout proceeds from causes of irritation affecting the nervous system, the influence of these medicines will be more favourable in removing the symptoms, and less injurious to the constitution, than in cases of repletion and wrong function : but even here I do not approve their use.

It is contended by some persons, that every useful object is effected by first having re-

course to suitable doses of any of the strong medicines, or strong preparations of colchicum, so as to subdue the urgent symptoms without delay ; and then by adopting the use of regular aperient medicines for the removal of the remaining symptoms. The proposition of this mode of treatment seems plausible, and is much more reasonable than trusting solely to the agency of these preparations, in dismissing the immediate symptoms.

The experience and attentive observation of many years have convinced me, however, that this is not the legitimate and proper proceeding ; and is infinitely less successful than the method of practice which I shall point out. It is highly important that the cure should be gradually conducted.

The stomach is more or less weakened by the action of the strong medicines ; the several functions below the stomach become

impeded ; and the usual consequence of arresting the symptoms so suddenly, is, that they return the sooner, and become more difficult of treatment, as the cause of the disease has not been combated. The most difficult and troublesome cases which have come under my care, have been those, in which, the paroxysm has been interrupted by the influence of one or other of the strong preparations.

In such instances of protracted gout, the habit of relapse, if I may so express myself, has become established in a most inveterate degree, and for a time has appeared to bid defiance to regular treatment. For example: when called to these difficult cases, I have found that the relapses have taken place every two, four, or six weeks. The nervous system has been much shaken, the patient being depressed in mind and body ; the limbs have been weakened and tender ; the muscles thin and relaxed ; the

digestive functions impaired ; the bowels in a most unhealthy state ; the action of the kidneys morbid and irregular.

This is a faint rather than a strong picture of the unhappy results of the improper treatment of gout.

When the constitution has been brought into this serious and confirmed state of error, I have found it extremely difficult to conquer the tendency to gout, and to restore the disordered functions to health ; but in every instance (and such cases have been very numerous) in which the patient has given me his complete confidence, and persevered with the means to the full extent of my wishes, I have reaped for him and for myself the reward of complete success. As it is not my intention, in this little dissertation, to relate numerous cases in detail, I shall briefly mention a few, concisely, by way of illustration.

A gentleman considerably advanced in years, had been in the habit of taking the different strong medicines, the eau medicinale, Wilson's and Reynolds' medicines, and the wine of colchicum, in succession, accordingly as the fame or accidental recommendation of one remedy, had superseded another. Instead of being attacked by regular fits of gout once or twice in the year, he was assailed by the disease every four, six, or eight weeks, which had brought upon the constitution every imaginable distress. I found the bowels in a most unhealthy state ; and, although the appetite was in general sufficient, the digestive powers and the ulterior process of assimilation had become so impaired, that, to use the expressive language of the patient, all his good food seemed to turn only to the disease, and to his discomfort.

I commenced my plan of treatment, solely by the use of correctives, and aper-

ents, and regulated diet. When gouty action returned, I employed the acetum colchici, neutralized, and in combination with aperients, with every advantage; but, except during the prevalence of the irritation of gout, I did not use even this mild preparation. The limbs were sponged night and morning with a lotion of camphor mixture and alcohol, used at a tepid temperature.

The second stage of treatment consisted in combining the use of a tonic with alterative and aperient medicines; and, as soon as the chronic inflammation and tenderness of the joints were removed, sponging with tepid salt water, and moderate friction and shampooing, were employed for the limbs. The diet was made more restorative.

The concluding treatment comprehended the discontinuance of alterative medicine, the diminished use of aperients, occasional use of tonics, and continued attention

to the limbs; for the treatment of which, a stimulating liniment was used. Change of air, horse and foot exercise, and all general aids to health and spirits, filled up the plan for restoration, with such success, that nearly two years passed away without a return of gout; and, in the third year, one paroxysm only occurred, which was short in duration, and yielded readily to my usual plan of treatment.

I am happy to add, that the patient has not only lost the frequency of gout, and had merely an occasional visit of the disease, readily yielding to treatment, but has acquired a new state of constitution, and been complimented by his friends with the pleasing remark of having taken a new lease of life.

Another gentleman, between fifty and sixty years of age, who had exhausted the whole catalogue of irregular remedies, and

had continued the use of Wilson's tincture till he became nauseated at the very sight of the medicine, induced such a frequency in the recurrence of the gout, that he scarcely ever felt free from some symptoms of the disorder. He was thin, debilitated, and nervous. I found his constitution completely disordered, and every function more or less unhealthy. The progress of the cure was extremely interesting.

Under the influence of corrective and aperient medicines, in conjunction with the use of sarsaparilla, the health improved; but gout ere long returned; for, in this instance, so strong was the habit of relapse, that it was not reasonable to expect that it would yield in a short time. During the first half year, the gout returned less frequently than before, and less severely. At the beginning of winter, however, after exposure to damp and cold, a paroxysm took place. with great force of symptoms.

The patient being persuaded to believe, that the constitution would receive eventual benefit from leaving the gout to its own course, simple treatment only was pursued for the space of three weeks; when he became so much exhausted by pain and irritation, that he was anxious to adopt such methods as might be recommended for the removal of the gouty symptoms.

The debility of the patient required a mixed plan of treatment; and I directed a draught with the sulphate of quinine, alternately with a saline aperient draught containing a full dose of the acetum colchici; so that two draughts of each kind were taken every twenty-four hours. At night a combination of calomel, James's powder, opium, and colocynth, was given with much advantage. The tender and inflamed joints were treated chiefly with poultices made with the evaporating lotion and bread; and soap plaster was applied

to the affected parts after the removal of the inflammation ; friction and other methods being used in a further stage of the convalescence.

The symptoms were at length overcome, and the convalescence was favorable ; but the bowels had been in so confirmed a state of unhealthy action, that a perseverance in alterative treatment was required for a considerable time. Such, however, was the final benefit obtained, that one whole year passed away without any interruption from the gout ; and not only was this new comfort enjoyed, but the general state of the constitution was improved in the most satisfactory manner. Instead of sallowness of the complexion and emaciation, a healthy colour, and a firm increase of bulk, gave assurances of renewed activity and health in the natural functions.

At the end of a year a fit of gout oc-

curred ; but it was completely manageable, and all the acute symptoms yielded favorably in the course of a week ; a quick convalescence succeeding.

In a third case, and the only remaining example which I shall think necessary to state, a gentleman, about forty-five years of age, had produced such a remarkable frequency of gout, from having taken Wilson's tincture and the strong preparations of colchicum, that he was scarcely one week free from actual pain and inflammation. He was rendered extremely nervous, and his complexion was so remarkably yellow as to give full indication of the obstructed and unhealthy state of the biliary organs. The tongue was furred, the appetite irregular, and the bowels were extremely disordered ; the excretions being acrimonious and quite unnatural.

For the first week, an alterative pill was

administered every night, and the saline form of the acetum colchici aperient draught twice every day. In the second week the pill was taken every other night, the draught in the morning early, and in the middle of the day, a dose of sarsaparilla infusion from the bark of the root, with carbonate of soda. When, after some time, the disposition to the return of gouty inflammation appeared to have been effectually checked, and the state of the liver and of the bowels had become materially improved, the colchicum draught was used only occasionally ; but an aperient was employed every other morning for a considerable continuance, and much aid was afforded to the general strength by the use of the quinine.

This gentleman has passed over a year without a return of gout ; and, by paying due attention to the regulation of the bowels, and to diet and general regimen, he has enjoyed a new state of constitution, and

acquired feelings of comfort and good nerve, to which he had very long been a stranger.

The cases of gout which I have here briefly stated, have been those examples of troublesome relapse which have required a particular method of treatment, including, in the list of remedies, the use of the acetic preparation of colchicum, administered occasionally in conjunction with correctives and aperients, during the prevalence of gouty inflammation.

It happens occasionally, that the constitution is labouring under the influence of some other disorder, of more serious importance than the gout; in which case, the symptoms of gout for the most part have only a transient stay, and alternate with very distressing disturbance of the nervous system.

In my Treatise, I have laid it down as

a principle, that we should attempt the prevention of a fit of gout, if warned of its approach; and interrupt its progress when formed, unless a state of constitution exist, implying that the gout has taken the place of another more serious disease, or may be expected to prevent one which is threatening, and more to be dreaded than itself; but even in this event of gout, it is highly proper to moderate the violence of symptoms, and protect the system from excess of pain and irritation.

With regard to the question of soliciting the gout, in order that it may take the place of another disease, we are to consider whether it is proper to use any stimulating means, in reference to the existing disease. For example, if a gouty patient have an inflammation of the lungs, bleeding and the usual means of treatment are to be practised, with a freedom corresponding with the force of the symptoms: and if any

means were used to invite the gout, they should be local only ; as the use of a pediluvium with hot water, flour of mustard, and bay salt ; and of liniment consisting of the *linim. camph. comp. et tinct. lyttæ*.

Whatever the existing disorder may be, it should be treated, with very little modification, according to the actual symptoms, and not upon any fanciful theory regarding the gout.

I have known some gouty persons complaining of symptoms evidently threatening apoplexy, who have attempted a more than usually stimulating plan of diet, with an increased quantity of wine, in the idea of forcing the gout ; but the sensations in the head soon compelled them to desist from such improper proceeding. One gentleman actually suffered from apoplexy, in consequence of such hurtful excitement.

The internal use of the Bath water

is equally improper under such circumstances.

More particularly between the age of fifty and sixty, the constitution sometimes falls into a chronic state of indisposition; in which the nervous system becomes affected in a great degree; and although, from want of tone in the system, the different functions are not performed with energy, yet no one organ seems particularly affected. There appears to be a general state of atony. In this description of cases, cordial stimulants and the Bath water are highly useful. Amongst medicines, ammonia, if given in large doses, possesses the highest power in exciting the gouty disposition into action.

Sometimes a gouty person labours under chronic disorder, in which the tendency to excitement of the circulation, and the disposition to nervousness, seem equally balanced. Here we must steer a middle

course, as regards the gout; neither studiously inviting a paroxysm, nor checking it if it arrive; being careful to treat the actual symptoms, on the usual fixed principles of sound pathology.

On the subject of prognosis, it is encouraging for me to observe, that there are many serious states of disease, which are less really dangerous when affecting a gouty patient, than when similar symptoms affect one who is not liable to gout. In other words, the gouty diathesis so intermixes itself with other symptoms, that, from the disturbance of the nervous system which is so much under the dominion of gout, the case will often appear more alarming than the event proves it to have been.

As briefly illustrating this statement, I may allude to the existence of palpitation of the heart, troublesome in degree and tedious in duration, yielding at once to the occur-

rence of a fit of gout:—urgent affections of the head; the lungs; the stomach; the bladder; the prostate gland, &c. becoming mitigated very materially by the super-vention of the gout. I imagine that this kind of conversion of disease has led some writers, and especially the French authors, to give the appellation of gout to almost every form of complaint which occurs in a gouty person.

Numerous cases have come under my care, in which no sign of gout in the limbs has been present; but the general derangement of system has been such, that the patient has been very desirous of having a fit, in the hope that it would prove a relief. The nervous depression which attends this state of the constitution, is extremely distressing, and demands more fortitude to be endured than actual pain.

A gentleman, aged between fifty and

sixty, subject to occasional attacks of regular gout, was sensible of the threatening symptoms of a fit, at a time when his convenience would not allow of confinement. He took a full dose of Reynolds' specific, which had an active operation, and the symptoms passed away. In about a fortnight, gouty inflammation suddenly appeared in the foot; and this yielded to two doses of the same medicine: but from this period he felt constantly unwell. In three or four weeks after, I was consulted, and found him ill with the following symptoms:—pain of the head and giddiness, with much heat of the scalp, and an apprehension of apoplectic seizure; coldness of the lower extremities; a pulse of much irritation, it being frequent and small; the complexion very bilious; the tongue exceedingly furred; a loathing of food; almost a suspension of the action of the kidneys, the urine which was passed being of a deep colour and depositing an abundant lateritious sedi-

ment; the bowels torpid, and the fæces of an olive green appearance, with an unnatural foetor. The nervous system was much affected; the short sleeps at night being disturbed with distressing dreams; and the spirits during the day, agitated with all the horrors of the hypochondriac imagination.

This was a very genuine example of the effects of suppression of gout, by means of the specific agency of colchicum; or, in other terms, its powerful agency in removing the symptoms of gout from sight, while the cause was left remaining in full force within the constitution, and exerting an irregular and dangerous influence on the nervous system. All the important functions were disturbed, and the healthy balance of circulation was completely interrupted. The following treatment was adopted: sixteen ounces of blood were taken from the neck by cupping; the head was frequently

washed with vinegar and water, and, when unusually heated, was covered with wetted cloths. A pediluvium, with a solution of bay salt, and the addition of flour of mustard, was used a few times, till the extremities became more regularly warm. Repeated doses of calomel, James's powder, and compound extract of colocynth, were administered at bed time; and in the morning, a suitable combination of sulphate of magnesia, manna, senna, &c.

Twice a day the patient took a saline draught, with the addition of m. x. of tincture of digitalis. The diet was fluid, and a very free use of rennet whey was directed, in order to promote the action of the kidneys.

A moderate degree of gout took place in the feet, which was left to its own course. I did not conceive it desirable that severe gouty inflammation should be produced;

for, in such case, the nervous system would most probably have sustained more injury from irritation, than could have been compensated by any other benefit ; and I was persuaded that the proper application of active medicines was more calculated to restore the various disordered functions, than the mere influence of long-continued gouty inflammation. But this view of the subject is widely different from any plan of checking the gout by improper treatment.

I may add, that it by no means follows, as a consequence, that unrestrained gouty inflammation in the extremities, with its attendant circumstances, would have the effect, in such a case, of inducing the desired healthy action in the visceral functions. As in other forms of disease, the efforts of Nature may be aided most usefully by the interposition of Art.

In the present case, free evacua-

tions having been established, and a material improvement effected in the secretions, an interval of two or three days was allowed for the discontinuance of the mercurial purgative ; when it seemed expedient to direct, each night, gr. iv. pilul. hydrarg. c. gr. ii. pulv. scillæ, and, in the morning, sufficient of an electuary composed of pulv. scammon. compos. potass. supertartrat et confect. sennæ, with the addition of syrup of orange peel. The draught was continued. The appetite soon returned, and mild solid food was allowed, with some diluted sherry. The secreting functions became materially improved, the urine being abundant and without sediment, and the bile of healthy quality.

The saline mixture was omitted, and, as a tonic, the infusion of the cortical part of sarsaparilla in lime water was first employed ; and afterwards the sulphate of quinine, in a suitable vehicle. Change of

air was one of the means contributing to complete the cure, which, in the course of two months, was most favourably effected.

I may here be permitted to digress a little on the merits of sarsaparilla, and of the sulphate of quinine, as medicines of restorative and tonic power.

There has usually been much difference of opinion respecting the virtues of sarsaparilla; some practitioners considering the infusion of it merely in the character of a mild vegetable diluent; while others esteem it as conducive to the tone of the stomach, and restorative to the constitution in a very high degree.

From much experience in the effects of sarsaparilla, I am led to entertain a very favourable opinion of its medicinal qualities*.

* The French Journal de Pharmacie for November, 1824, contains a report of the discovery by M. Palotta, of an alka-

It has been the custom to prescribe a decoction of the roots with the subsequent addition of extract, to be taken in the quantity of a pint daily. Such patients as possess a strong state of stomach, have thus merely to endure the disagreeable task of drinking rather nauseous potations; but those who suffer from weakness and delicacy of stomach, most commonly soon experience a sense of weight, and much nausea and disagreement, from large doses even of the decoction alone.

Amongst the recent improvements in pharmaceutical medicine, we have ascer-

line base in sarsaparilla, to which the name of *parigline* is given. It is procured from an infusion of the roots in boiling water, treated in succession by quicklime, an aqueous solution of carbonic acid, and alcohol. M. Palotta made trial in his own person of the medicinal properties of this salt. He found that eight grains occasioned nausea, and thirteen slight vomiting. Some speculative observations are added to this statement; but we must wait for further information to enable us to judge of the merits of this salt as a remedy. The results, however, support the conclusion, that sarsaparilla is not to be considered as an inert substance.

tained that the efficacious properties of sarsaparilla reside in the cortical part of the root, and that it becomes advantageous to separate this from the other parts which seem to consist wholly of woody fibre, mucilage, and extractive.

By a comparative examination of equal quantities of an infusion of the bark of sarsaparilla in cold water, in boiling water, and in cold lime water, and also of a watery decoction, the proportion being four drams of cortex to the pint, I found that the cold water took up of solid matter forty grains; the boiling water fifty-two; the lime water forty-four; and the water by decoction sixty-four grains. It is worthy of observation, that the alkalescence of the lime water was destroyed, as was proved by the test of turmeric paper; and hence we may suppose that some acid principle residing in the sarsaparilla had neutralized the lime.

It has appeared to me preferable to

employ boiling water for the purpose of infusion, rather than to use the boiling process in the way of decoction : the infusion is more free from mucilage. I consider that four ounces of this preparation is a sufficiently full dose, and it may be given alone, or joined with other medicines, as the judgment of the practitioner may direct.

An agreeable mode of administering the lime water infusion, is, to mix the dose of two, three, or four ounces, with an equal portion or less of hot milk, and the addition of a tea spoonful, or less, of brandy. Except with such persons as find milk disagree, I have had most cause to approve this last method of giving the medicine. I have often indeed seen that milk thus blended, agrees remarkably well even with those who have protested against its use in any form.

The chemists have adopted different modes of concentrating the qualities of sarsaparilla; and of such preparations the syrup

is the one most employed. This form of the medicine possesses the recommendation of being very portable, and most conveniently ready for use. As an addition to the watery infusion, rendering it perhaps more agreeable, and increasing its power, it may sometimes be used with advantage. But in full doses, I do not think so favourably of the use of the syrup; for the quantity of saccharine matter thus introduced into the stomach, is difficult of digestion, and tends rather to impair than to improve the appetite

We frequently meet with instances of debility in constitutions which do not appear to admit of the use of tonics. Medicines of this class may seem to be suitable at first; but in a short time their stimulating power excites feverish irritation, and disorders the system. In these cases, the watery, or the lime water infusion, may be prescribed with almost certain advantage. As a restorative

medicine during the convalescence from a gouty paroxysm, I have never seen any ill effects from its administration.

The sulphate of quinine has lately come into very general use, and has already acquired the high character which is justly due to its merits.

It presents a striking view of the properties of this remedy, when we state, that from sixty grains of the best yellow bark, one grain and a half only of sulphate of quinine can be prepared. A small portion of cinchonine is also afforded; but the remaining mass appears to consist almost wholly of woody fibre, not possessing any medicinal property.

Hence it is at once seen that we gain the opportunity of administering a powerful dose of the active principle of bark, in a small compass. The cinchonine is obtained

in so slight a proportion, that it is disregarded by the chemist; and the physician does not prescribe it, because it is a much less efficacious medicine than the quinine.

This medicine, which, for familiar comprehension, I may call the essential salt of bark, gives full proof of its efficacy by its curative power in ague. For this purpose, a range of dose from two to four grains, must be administered with great frequency. Persons who complain of much disagreement from the ordinary preparations of bark, chiefly from the oppression of the stomach which they produce, can take the sulphate of quinine with perfect satisfaction.

I have prescribed this medicine with very great success, as a tonic for the gouty patient, in the stage of convalescence. The following is a formula which I have most commonly used. It is agreeable to the pa-

late, and almost invariably suits the stomach*.

R Sulphat. Quinin. gr. iss.
Infus. Rosæ, ʒ x.
Sp. Myrist.
Syr. Aurant. ā ā ʒ i.
Acidi Sulph. Dilut. gr. ii.—M. Ft. haustus.

For every additional grain of the sulphate of quinine, it is useful to add two drops of the diluted sulphuric acid, which answers the purpose sufficiently of keeping the salt in solution. I do not consider that the useful properties of the quinine become impaired by the slight combination which it forms with the astringent principle of the rose.

To return from this digression, I shall

* If circumstances exist which render the fluid form of medicine objectionable, the sulphate of quinine may be prescribed as a pill, made up with the extract of liquorice; but as it is a very insoluble salt, I am led to prefer its administration in a state of solution. The infusion of serpentaria, with the addition of sulphuric acid, forms an useful medicine with the quinine.

notice that state of the constitution in a gouty patient, in which, he is troubled with feelings of general indisposition without the presence of gout; and probably without the threatenings of a paroxysm; but he complains of nervousness, an indescribable lassitude, and an inaptitude to mental and bodily exertion.

Very commonly the appetite is not deficient, and the stomach itself is not apparently disordered. Below the stomach, however, much uneasiness is felt, in sensations of distension, and inadequate relief in the daily action of the bowels. The evacuations have an unnatural appearance, varying, of course, in different cases; but, as a general description, I may observe, that they are either unnaturally dark, or light; the one appearance being indicative of a vitiated secretion of bile, together with morbid action in the exhaling vessels of the bowels themselves; the other appearance marking the

absence of bile: and these indications will sometimes alternate. There is usually much mucus mixed with the fæces; and when it abounds, the error of function may be considered to have been of long standing. Sometimes the fæces are passed chiefly in the form of pellets, with effort and irritation.

The urine is variable in quantity; on some days, being scanty and of a dark colour, on other days, profuse and pale; but, in general, that part of the secretion which is connected with digestion, namely, that which is passed at night or in the morning early, deposits, on cooling, a considerable quantity of sediment, which is of a bright pink colour, or has the appearance of brick-dust. In persons of a nervous constitution, this kind of sediment, which abounds with uric acid, alternates frequently with a whitish sediment and a shining pellicle on the surface; and these last appearances

indicate an excess of the phosphoric acid. With each kind of sediment, an excess of mucus is present.

If proper treatment be not employed for this disordered state of the constitution, a troublesome fit of gout may be expected as the consequence. Yet this is not the worst evil which arises. A confirmed error in the functions of the liver becomes established, which will not yield to the influence of the gouty action on the system, but requires a persevering use of medicine ; and the difficulty of the cure is very much proportioned to the delay of applying remedies.

I am here led to make an observation on the peculiar impatience which gouty persons often manifest under medical treatment ; and this is chiefly seen in those who have been in the habit of driving away the symptoms by some empirical remedies.

I affirm, that every troublesome case of gout is more or less connected with, and depending upon, a wrong action of the liver, and a faulty condition of the bowels; and that this state of disorder, and the gout, stand in the relation of cause and effect. The patient is disposed to think, that gout is his only disorder, and that he may fairly impeach the skill of the physician, if he do not obtain a speedy cure. It is too probable that he refuses compliance with the steady and slow plan of treatment, which can alone be useful; and he resorts to quackery, or leaves the disorder to its own course. In every case of this description, which must require time, it is incumbent on the physician to announce this important truth at the commencement,—that the gout occurring occasionally, is only to be viewed as the secondary disease; and that the patient must resign himself to the gradual influence of remedies, in the same way that he would do,

without murmur or objection, if he were labouring under confirmed bilious complaint, without the participation of gout.

In these circumstances, I avoid entirely the use of the acetum colchici, unless gouty inflammation be present ; and employ, with some little modification, the same line of treatment I should consider proper in the case of any individual suffering from chronic bilious disorder, who never had shown any disposition to gout.

It would be foreign to my present purpose to enlarge upon this view of the subject ; but I am tempted to offer some remarks on the use of mercury.

I consider it an axiom of importance, that mercurial medicine should never be administered to gouty persons, to any extent which carries with it the risk of producing mercurial fever.

I make it a rule to employ it with a view to immediate purgative action ; or as an alterative, in conjunction with aperient medicine.

When the alvine excretions are morbidly dark and foetid, and the urine, on cooling, deposits pink or lateritious sediment, I give the preference to a moderate dose of calomel, combined with about a grain of James's powder, some compound extract of colocynth, and three or four grains of extract of poppy ; to be administered at bed time ; directing a suitable aperient to be taken in the morning, before rising.

This method being continued, with occasional intermission, till the appearances afford the evidence that vitiated secretions are effectually removed, it will be expedient to use the more alterative form of mercury, as, for example, the *pilula hydrargyri*, the *hydrargyri oxydum cinereum*, or

the pilula hydrarg. submur. compos. in combination with the compound extract of colocynth, or the extract of rhubarb ; giving, regularly, a gentle aperient in the morning, of a nature not calculated to weaken the stomach, or produce nausea. The pilula hydrargyri is the mildest of these mercurial preparations. Half a grain or a grain of ipecacuanha, and a grain or two of castile soap, may, on many occasions, form an useful addition. I prefer the ipecacuanha, if desiring to increase secretion into the bowels ; the powder of squill, if wishing to act upon the kidneys ; and James's powder, for the purpose of promoting a more free action of the skin.

The compound aloetic decoction, with camphor mixture, is favourable to the stomach as a morning aperient, when cordial property is desired in the medicine ; when more of cooling quality, the sulphate of magnesia in camphor mixture, about m. xx sp. ætheris nitric. and some syrup ; or a

mild combination of infusion of senna with manna and salts ; or salts* alone.

In combination with this use of corrective and aperient medicine, regard is to be paid to the tone of the stomach ; and I find it usually desirable to prescribe, in the middle of the day, some preparation of sarsaparilla, in one or other form as before mentioned ; or the sulphate of quinine. A strict attention to suitable regimen, in all its particulars, is so important, that, if it be neglected, neither physician nor patient can obtain success.

When the biliary functions are com-

* I often prescribe, with great success, salts prepared at my desire by Mr. Garden, 372, Oxford Street, according to the analysis which I published some time ago of the Cheltenham water. This composition contains the muriates of lime and magnesia, which are very efficacious and useful ingredients. I find it to be a much more serviceable medicine than the preparation sold to the public, under the denomination of genuine Cheltenham salts ; which, by chemical examination, I find to consist almost exclusively of Glauber's salt.

pletely restored to health, the mercurial alterative should either be laid aside, or used only occasionally; but when the action of the liver and of the intestinal canal is permanently in error, as I have pointed out, the value of mild doses of mercurial medicine, in conjunction with aperients, is, in my mind, unquestionable. The alterative administered at bed time, and the aperient before rising in the morning, afford real benefit and sensible relief. In this manner also, an increased action of the bowels may be maintained for a long time without producing debility; because the morning medicine does not rob the patient of nutriment, while it ensures the removal of vitiated accumulation from the bowels. Aperients given during the day, if long continued, tend to reduce the strength and flesh; by preventing a sufficient stay of the food for perfect digestion.

I am solicitous to draw the just line of

distinction between the use and abuse of mercury. If employed with judgment and caution, it is the most valuable agent in the *materia medica*, for effecting the desired change of action in the different secreting organs, connected with digestion; and I confess my regret, that any respectable author in medicine should level accusations against almost any use of mercury, which can only, with the smallest propriety, be offered against its abuse.

In gouty persons, and those also who are not liable to gout, we meet with examples of constitutional indisposition, so obscurely marked, that, unless we investigate the nature of the excretions from the alimentary canal*, in a very regular man-

* I cannot refrain from making a slight allusion to a state of complaint in the intestinal canal, which is sometimes very mysterious in its character; while it is productive of the most distressing symptoms. The bowels are in a very irregular state, but for the most part confined. At one moment they are torpid and scarcely affected by powerful doses of

ner, we shall fail to obtain any knowledge of the nature of the case, or its proper treatment.

I frequently have occasion to see chronic cases of this kind. The patient is at a loss to describe his complaint; and more especially, as it often happens that the bowels are regular in their daily action. He speaks of nervous depression and occasional lassitude, and probably suffers some degree of pain, or rather of uneasiness in the right side (the hypochondriac region), or shoulder, or shoulder blade. Frequently the sleep is unrefreshing; but, beyond this description, I have no material mention to make of sensible symptoms.

medicine; at another, they are very sensible, and easily irritated. Medical treatment appears unavailing. The nervous system participates in the disorder with exquisite sympathy. Such cases, of which this description is but the outline, I have seen to arise from stricture in the rectum; which may be either spasmodic, or permanent. The successful treatment consists, essentially, in a judicious employment of the bougie.

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In general, it happens that the appetite returns with each returning hour of meals ; but it is evident that the digestion is not perfect ; for invariably I have detected that the patient has lost flesh, and more particularly has not his natural firmness in the muscles of the limbs. The abdomen is usually distended and unyielding to pressure, when examined by the hand.

In conducting the management of such a case, it is indispensable that we examine the alvine and urinary excretions daily ; and we must be careful not to suspend the united influence of medicine and regimen, till we have sufficiently continued evidence of the restoration of healthy function*.

* A gentleman, aged forty-seven, had been suffering dull aching pain in the situation of the right kidney, during many months. He was dyspeptic and had lost flesh. His spirits were extremely depressed. From high authority, an opinion had been delivered, that in all probability the kidney was irritated by the presence of calculous matter ; and a method of treatment, founded on this conclusion, had been pursued for a great length of time, without the least benefit. I found the secretions so unhealthy, and the complexion so remarkably

By means of such attentive treatment, the gouty patient is spared the sufferings of a paroxysm which would certainly take place, if the insidious error of functions, which I have endeavoured to describe, were allowed to proceed without the interposition of proper remedies.

The observation, as regards the prevention of greater evil, is equally applicable to those who suffer from gall-stone, or other acme of bilious disorder ; and which, in constitutions so predisposed, is a common consequence of the neglect in question.

The prophylaxis, or the care which can be most usefully taken to prevent the re-

bilious, as immediately to assume an opinion that the posterior part of the liver was the seat of pain ; and that the whole complaint was in the liver, and not in the kidney. The urine was usually as deep in colour as porter, and the alvine evacuations were most unnatural. By means of a course of mercurial purgatives, and other means prescribed in reference to this view of the case, the patient, after some months, perfectly recovered.

currence of gout, by the general management of the constitution, is a consideration which I have yet to discuss; and, also, I shall offer a few general observations upon the treatment of a regular paroxysm of gout. At the same time, I shall beg permission to refer the reader, who is desirous of more information, to my extended Treatise on the subject; while I present this compendium as chiefly intended to bring into view, some particular points of theory and practice, which appear to be doubtfully admitted; or of principles which deserve to be enforced with new emphasis.

Although it happens occasionally, that the utmost care and prudence prove insufficient to prevent the first visitation of gout, or its returns; yet, it is still more familiar to our observation, in how great a degree the disease is the offspring of indulgence and irregularity in the habits of living.

Selection in the articles of diet, and moderation in quantity, must be the peculiar care of the gouty patient, if he desire to counteract the returns of the disorder. As regards the quality, he must be mindful to avoid those materials which most tend to cause acetous fermentation ; also, on the other hand, those which are too nutritious. A dinner of turtle might be digested with perfect comfort ; but it would be a deviation from the proper principle of diet, as tending to the formation of too much blood.

Until the constitution has become weakened, it usually happens that the stomach of a gouty patient is very competent to its office, and that the appetite is regularly active, rather than deficient. In fact, it is a very common case, that too much food is taken into the stomach, to admit of the subsequent process of digestion being perfectly performed ; or, supposing that every stage of the digestive action is completed in a healthy

manner, and that all the chyle is assimilated into good blood, a plethora gradually takes place, which introduces a fit of gout.

Indigestion in the stomach itself is readily distinguished by the patient, in the notable symptoms of heart-burn; flatus; a sense of weight, or soreness, after a full meal: but the consideration of diet, as respects the plethoric state of constitution, belongs to the exercise of judgment and reflection, rather than to sensation.

Common prudence and immediate comfort, would dictate to every one, the necessity of avoiding any kind of food which experience had proved to be unsuitable. In principle, also, many articles of food should be avoided by the gouty patient; and, as being unfavourable to immediate digestion, I may mention—salmon and stewed fish; pork food, unless care be taken to avoid the skin and fat; all meat which

is not tender, but especially hard salted meats; pickles, unless occasionally and sparingly, and when they are well seasoned; salads, except now and then, and when the stomach is in the best state; for, besides that these latter articles are not convenient to a stomach liable to become disordered, they quicken the appetite too much for meat. Rich pastry, and most confectionary, should be avoided; although a plain pudding with any kind of good fruit, or the preparations of semolina, rice, or bread, and stewed fruit, are as proper for a gouty individual as any other.

Most persons commit still greater error in the quantity, than in the quality of their food; and, as respects the production of gout, it is eventually even more important. A fit of indigestion will often cure itself; but the gradual repletion of vessels which ensues from a full system of diet, with certainty leads to continued disease. Hence,

it is of consequence to avoid heavy rich soups ; and, as a general rule, I would advise the restriction to plain well-made gravy soup, and that sparingly. Oysters, when quite in season, and the beard part removed, are easily digested, as is proved by the large repast which can be made on them without inconvenience ; but they are too nutritive to be eaten freely, when it is an object to counteract plethora. This observation is applicable to the use of food of every kind, which contains a great deal of nourishment much condensed.

Simplicity of diet consists greatly in choosing what is most proper, and confining the meal to such judicious choice, instead of partaking of a great variety of dishes ; but the temptations of a well-spread table, demand the exercise of greater prudence than is usually practised.

It will perhaps be used as an argument,

that the French make a practice of indulging in a much greater variety and quantity of animal food than the English, and that gout is not so prevalent among them as with us. This, however, is only a part of the argument. Their dishes are so much stewed, that they do not require much digestive power in the stomach, and the ingenuity of the cook in making a small quantity of meat serve to a great extent, in mixture with vegetables, oil, butter, spices, &c. is such, that, in point of actual nourishment, it contributes less than the English roast beef. Such food also passes off more readily ; and this effect is favoured by the use of light wines, many of which are drunk with the addition of water. The dinner table is soon quitted ; and when we contrast this custom with the English one of a protracted dinner, consisting of a great variety of the most substantial dishes, with the heavy and strong liquors of porter or ale, and port and madeira in large quantity ;

with the additional effect of remaining without exercise, perhaps for several hours afterwards, need we wonder at the difference of result ?

A good French cook, therefore, may probably present many dishes which suit a weak digestion, better than our substantial English fare. Bad French cookery can only suit those who are accustomed to it.

At the same time, however, that I am drawing the present comparison, I must give my unqualified praise, if not my preference, to good tender meat, well dressed in the English style, with any wholesome vegetable in season, well boiled ; attention to proper mastication, and prudence in quantity, being taken into the account.

The gouty patient, sincerely resolved to use the best method of counteracting the returns of his disorder, will confine himself

to the very careful use of good stomachic wine, matured by time ; as sherry, madeira, or port, a little diluted with water. It is easy to point out the rule of doing what is safe and proper at the table ; but the difficulty is, to be obeyed : and the physician is often called upon to pronounce how much error may be committed with the least probable impunity ; rather than to lay down exact rules for the observance of what is right.

Confining myself at present to these observations, I shall proceed to make a few remarks on the preventive use of medicine.

In adverting to the theory of the disease which I have offered, the leading point of care will, obviously, be directed to the prevention of repletion in the vessels of the viscera contained within the abdomen. The patient can judge of this particular, by watching the size of the whole abdomen.

It almost invariably happens, that every protracted fit of gout is preceded by notable signs of fulness and increase of size in this part of the body ; and, very commonly also, the patient has some warning feelings of general oppression of the system, arising from an overcharged state of the circulation.

In proportion as care and moderation in diet are observed, together with a due share of regular exercise, the use of medicine is less required. Important to health as the regulation of the bowels is for all persons, it more particularly concerns the gouty patient. The natural action of the bowels, however regular, does not appear sufficient to oppose the accumulation of morbid secretions ; and which, after a time, seem to concur with other circumstances in giving rise to a fit of the gout.

Experience is in favour of this supposition ; for we find that the frequent use of

aperient medicine very materially tends to prevent the recurrence of gout.

For this reason, we hear the praise of remedies sufficiently simple in their nature ; and of none more than the mixture of a few grains of rhubarb and magnesia. Many persons, by taking six or eight grains of each every morning, have been very successful in lessening the frequency of the returns of gout. With others, these ingredients do not act favourably.

For the majority of gouty persons, I prefer the occasional use of more efficient aperients ; as of the electuary mentioned at p. 76, or pills consisting of scammony, colocyath, and soap ; or some analogous preparation ; occasionally, also, prescribing some combination with the *pilula hydrargyri*.

As a simple and very useful mixture for familiar use, I may mention carbonate of

potash and infusion of rhubarb, with a little ginger or other aromatic.

I would lay it down as a general rule, that every gouty person, however regular the state of his bowels may be, should take some aperient at least once a week throughout the year, and if he be corpulent and of full habit, twice a week; and further, that in every instance it is important that the bowels act once a day, as a constant rule; and those who are corpulent, or much prone to gout (unless debilitated), should study to produce the habit of action night and morning.

I have often witnessed the very good effect of the daily use of a dinner pill; and for this purpose, five or six grains of the *pilul. rhei compos.* of the *Edin. Pharmacopœia* usually answers quite well.

It is requisite to vary the medicine, and

adapt it to the difference of constitution in different persons ; and, even the same individual finds it necessary to change the stimulus occasionally.

I have already pointed out, that when the complaint is bilious ; the bowels in a confirmed state of error ; or any threatening feelings of gout are present ; a course of medicine, more or less continued, should be directed by the physician.

The treatment of a severe paroxysm of gout requires, according to my view of the subject, a combined and comprehensive plan of medicines, suited to meet the several symptoms of suffering and disorder. I need not repeat my objection to the employment of any of the various nostrums, or the strong preparations of colchicum. I have also explained the grounds on which I recommend the use of the acetum colchici, neutralized and joined with an aperient

salt. It may be combined according to the judgment of the practitioner in the particular case.

If given in the form of a saline draught, with carbonate of potash and lemon juice, the carbonate of magnesia should be used with the sulphate; but otherwise, the calcined; and, as a vehicle, any aromatic distilled water, or some agreeable tincture added to water, may be used as the fancy may direct.

When the bowels are in too irritable a state of action, the sulphate of magnesia should be omitted in this draught. The dose of acetum colchici, which I am in the habit of prescribing, is, from half a dram to a dram and a half; and very commonly a dram. Combined in the manner just mentioned, it agrees almost invariably with the stomach; and never occasions constitutional nervousness or other inconvenience.

Occasionally, I find much advantage from using this medicine in the form of a pill, made with the extract obtained from the acetum colchichi by inspissation*. From the best estimate which I can make, I consider that one grain is equivalent to eighty minims of the fluid acetum colchici. I combine, or join in use, other medicines with this extract, according to circumstances.

Moderate doses of calomel, with James's powder and the compound colocynth extract, form the most efficient aid to the draught, for the evacuation of vitiated secretions. For the relief of pain at night, some combination of opium should be used; and it is usually advantageous to join with it, either James's powder, or tartarised antimony, in a moderate dose, so that rather a free action may be produced on the skin.

* In order to secure uniformity in the medicine, I have hitherto prescribed it as prepared, at my desire, by Mr. Garden, Chemist, Oxford Street.

In some constitutions possessing the nervous temperament in a high degree, the sufferings produced by the paroxysm, and even the influence of the necessary treatment, induce a certain degree of debility and depression, which render it necessary to unite the use of restorative medicine, and of a nutritious diet, with the occasional use of correctives and aperients, even before the acute symptoms are wholly removed.

In all cases where the stomach is impaired in its nervous energy, or the constitution is relaxed, the judicious employment of restorative means is important.

I have already adverted to the valuable properties of sarsaparilla, as one medicine ; and of the sulphate of quinine, as another, in regard to the present point of consideration.

Local treatment, conducted with care

and prudence, according to the method which I have laid down in my Treatise, is of great importance. The benefit derived does not relate merely to present relief. If the gouty inflammation be left to its own course, some change of organization in the affected textures is a common consequence; and certainly ensues from repeated attacks of inflammation. The evaporating lotion which I recommend, applied tepid by means of linen rags, or mixed with grated bread in the form of a poultice, usually affords great relief to the burning sensations; shortens the duration of the inflammation without repelling it; and prevents the deposition arising from morbid secretion, and the eventual thickening of the textures serving for motion.

Immediately after the removal of the preternatural heat, the only modes in which the lotion should be used, is, by sponging the part for a few minutes several times in the day, and applying a poultice at night

for the removal of tenderness, if required. The sponging process is used most conveniently by means of two hand basins, the one placed in the other : hot water being poured in the under basin, the lotion in the upper ; so that the desired comfortable temperature is easily kept up.

The stiffness and weakness of limbs which take place after repeated attacks of gouty inflammation, require a particular course of treatment. I shall, in this place, merely enumerate a list of remedies ; as, different kinds of baths*, according to the nature of the lameness ; sponging with tepid salt water ; friction, with liniments ; bandages ; and a systematic plan of hand-rubbing and shampooing. This last-mentioned

* In addition to the benefit afforded to the limbs, the influence of various kinds of baths upon the constitution is highly important. The vapour bath is a very efficacious agent in changing the functions of the skin ; and often, also, materially improves the action of the kidneys, and of the bowels.

treatment is quite indispensable in cases of permanent lameness and weakness. It is capable, in conjunction with other means, of affording great relief to the worst cases of this description; and, in very urgent instances, it leads to a cure which could not otherwise be effected.

I cannot refrain from again expressing my opinion, that there is not one important disease which admits of so much certain relief from medical treatment, as the gout.

If proper attention be given when the disorder first invades the constitution, lameness, and other distressing results of neglect, may certainly be prevented.

The returns of the complaint being induced by many remote causes, great care and watchfulness are required on the part of the patient. When the constitution has become completely gouty; and more espe-

cially, when the tendency to relapse has been increased by the influence of empirical treatment ; very prompt success cannot reasonably be expected from the use of regular medicines.

But in the worst cases, I do affirm, that solid and lasting benefit will be derived from instituting regular principles of practice, varied in the adaptation of remedies according to the difference of constitution, the nature and force of the symptoms, and the attendant collateral circumstances of each individual case.

I indulge the hope, therefore, that, in the progress of time, the love of quackery will cease to prevail amongst gouty persons ; and that the doctrines of medical science will be triumphant, and duly respected.

FINIS.

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